CONTROLLING INVASIVE PLANTS

Timpanogos Cave National Monument

PMIS Number

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Principal Investigator

Jon Jasper, Resource Management Specialist at Timpanogos Cave NM, will be the principal investigator. Mr. Jasper has been working with Dr. Duane Atwood who is contracted by the I&M program to inventory of the monument's plants and Susan Meyer who runs the Forest Service Scrub Science Lab. With these consultants, Mr. Jasper has been able to gain knowledge of the invasive plants present in monument and to develop strategies to control the spread of the monument's invasive plants.

Statement of the Issue

Invasive plants are the greatest threat to the health of our ecosystems. Invasive plants are plants that choke out desired vegetation. In the late 60s, Dalmation Toadflax was introduced to stabilize rocky slope; it has spread to cover over 9 acres of the Timpanogos Cave NM slowly choking out the native grasses and Penstemons. The small mammals and insects are dependent on these plants. The food chain is altered and the whole ecosystem is affected. Timely action is needed to save the ecology that took thousands of years to evolve from these recent infestations of invasive plants.

In the last year, the monument has started to combat its invasive plants. At least 22 invasive plants (see Table) have been identified infecting approximately 15 acres (6%) of the monument's 250 acres (see map). Being a small cave park, most of the funding and time is focused on the cave. Controlling invasive plants is treated as a collateral duty. The monument is of a manageable size that with funding support and timely action, the spread of invasive plants could be controlled.

Table 1. List of Invasive Plants at Timpanogos Cave NM

Commom Name	Species	Listing	Acres
Dalmatian Toadflax	*Linaria genistifolia* ssp *dalmatica*	Utah County Noxious Weed List	9
Spotted Knapweed	*Centaurea maculosa*	Utah State Noxious Weed List	<1
Morning Glory	*Convolvulus arvensis*	Utah State Noxious Weed List	<1
Cheatgrass	*Bromus secalinus*		?
Yellow Toadflax	*Linaria vulgaris*	Utah County Noxious Weed List	<1
Orchard Grass	*Dactylis glomerata*		<1
Yellow Sweetclover	*Melilotus officinalis*		<1
Common Mullein	*Verbascum thapsus*		<1
Hounds Tongue	*Cynoglossum officinale*	Utah County Noxious Weed List	<1
Bouncingbet	*Saponaria officinalis*		<1
Hoary Cress	*Cardaria draba*	Utah State Noxious Weed List	<1
Sherperd's Purse	*Capsella bursa-pastoria*		<1
Smooth Brome	*Bromus inermis*		~1
Tall Fescue	*Festuca arundinacea*		~9
Pepperweed	*Lepidium latifolium*	Utah State Noxious Weed List	<1
African Mustard	*Malcolmia africana*		<1
Jointed Goatgrass	*Aegilops cylindrica*	Utah County Noxious Weed List	<1
Common Milkweed	*Asclepias speciosa*		<1
Crested Wheatgrass	*Agropyron cristatum*		~3
Yellow Alyssum	*Alyssum alyssoides*		~3
Bull Thistle	*Cirsium vulgare*		<1
Bulbous Bluegrass	*Poa bulbosa*		~5
Canada Thistle?	*Cirsium arvense*	Utah State Noxious Weed List	?
Leafy Spurge?	*Cirsium scariosum*	Utah State Noxious Weed List	?

Brief Scope of Work

This project will involve pulling (and spraying) of invasive plants, researching techniques to control invasive plants (including compliance), mapping the invasive plant populations, reseeding effected areas with native plants, and educating the public on the need to control invasive plants to preserve their native ecologies.

Last year, a 3 person crew pulled over 10 acres of Dalmation Toadflax, Spotted Knapweed, and other invasive plant species. This year (FY2002) we plan to continue with pulling of the critical invasive species during the months of May and June. Chemical control is expected to start the following year (FY2003) as necessary.

Last year, 11 invasive plants were mapped in detail (see map). We plan to map out the species each year to evaluate the effectiveness of our efforts and to search for new populations.

The monument will revegetate disturbed areas that allow invasive plants to become established. The monument has started growing a small amount of native plants for

revegetation projects. Susan Meyers, from the Utah Native Plant Society and Forest Service Scrub Science Lab, has offered a volunteer base and assistant in growing native plants for large-scale revegetation projects.

Education is key to a successful project. A NPS poll showed only 52% approval for control of invasive plants. The public needs to understand the importance of controlling invasive plants. This project will involve educating staff and public through interpretive displays and programs. By building public support, additional support for a long term control of invasive plants should be possible.

Technical Assistance

Technical Assistance is needed for research and compliance for chemical control of invasive plants. Assistance in planning for an eradication and revegetation of a half-acre field is also needed.

Budget

FY-02		
Staffing -	GS-04 for 10 pp @ $911.00/pp	$9,110
Supplies -	Interpretive displays, Lawn Waste Bags, Disposal of weeds, Greenhouse supplies & seeds	$ 600
		Total = $9,710
FY-03		
Staffing -	GS-04 for 10 pp @ $911.00/pp	$9,110
Supplies -	Chemicals, sprayers, and treatment training, Lawn Waste Bags, Disposal of weeds, Greenhouse supplies & seeds	$ 600
		Total = $9,710